Article abstracts

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Isolation of prostate-derived single cells and cell clusters from human peripheral blood.

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The detection of blood-borne prostate cancer (PCA) cells may help with clinical staging and the further understanding of PCA metastases. We discovered prostate-specific antigen (PSA)-positive stained but not PSA mRNA-expressing blood cells by means of cell sorting and PSA reverse transcription-PCR in patients. Therefore, we developed a cytokeratin immunomagnetic method to isolate PSA-positive epithelial cells from the circulating blood of PCA patients. We obtained blood-borne single cells from 6 of 10 PCA patients and clustered cells from 8 of 10 PCA patients. Patients with benign prostate hyperplasia tested negative for cell clusters. The reported isolation method yielded prostate-derived cells or clusters of them from PCA-diagnosed patients.

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